

Procuring Accessible Digital Materials and Technologies for Teaching and Learning: The What, Why, Who, and How

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Accessibility of digital materials and technologies for all learners, including students with disabilities, has captured the attention of stakeholders on both sides of the education marketplace – consumers and developers. Fortuitously, consumer awareness is converging with the preparedness of developers to respond to market demand for accessible education products. To take advantage of this moment, consumers need working knowledge of what accessibility means, why it's important, who requires it, and how educational agencies meet their responsibilities. The confluence among consumer awareness, market readiness, and technical assistance availability presents an opportunity to make significant progress in advancing accessibility in procurement policies and practices

What does accessibility mean?

The Office for Civil Rights (OCR) at the U.S. Department of Education defines accessibility as “when a person with a disability is afforded the opportunity to acquire the same information, engage in the same interactions, and enjoy the same services as a person without a disability in an equally integrated and equally effective manner, with substantially equivalent ease of use.”¹ Key phrases to note are “equally integrated,” “equally effective,” and “substantially equivalent ease of use.” This definition sets a bar that guarantees a student with a disability is provided with curricular materials in needed formats, and technologies with required features, in a timely manner.²

In reality, many educators, and the agencies they work for, learn about the definition of accessibility as a result of litigation. It commonly appears in settlement agreements between OCR and education agencies, outlining corrective actions to ensure accessible learning environments for students with disabilities. The target of K-12 litigation has been primarily the inaccessibility of agencies' public-facing websites.³ Yet, higher education cases have frequently involved complaints of digital inaccessibility closer to the point of student learning, such as videos without closed captions, third party

internet-based applications that are inaccessible to screen readers, and clickers that aren't usable by students who are blind or have physical disabilities.⁴ The settlements are consistent in the range of actions that agencies agree to take in the interest of voluntarily resolution. Examples include conducting accessibility audits, creating new accessibility policies, providing training for faculty and staff, and hiring or designating an accessibility specialist.

Why does accessibility matter?

While the shadow of litigation is an undeniable factor, a societal shift in how disability is perceived has had its own impact on consumer demand for accessibility. In the educational realm, instructional practices that reflect the capacity of all students to learn have replaced outdated and deficit-oriented models. Universal Design for Learning (UDL) is a framework to improve and optimize teaching and learning for all people based on scientific insights into how humans learn.⁵ In curricula developed with the UDL Guidelines, materials provide multiple means of engagement; representation; and action and expression.⁶ Educators who practice UDL expect learner variability and know that curricula will fail if materials aren't equally effective, equally integrated, or are without substantially equivalent ease of use for all students. In addition to materials, the UDL framework guides the design of instructional goals, assessments, and methods that can be customized and adjusted to meet individual needs. Learner use of accessible materials and technologies in the context of UDL environments amplifies the intent of the definition of accessibility.

Who requires accessible digital materials and technologies?

As conveyed by UDL, all learners vary in their interests, how they perceive information, and how they physically interact with digital materials and technologies. For example, a student with low vision may need a high contrast white on black screen display but the same high contrast display could make reading more difficult for someone with a reading difficulty such as dyslexia. A student may proficiently navigate a tablet screen using finger swipes, pinches, and taps, while a student with motor challenges may need to use switch technology to access the same device. Or perhaps a student with a writing challenge such as dysgraphia needs speech recognition to write an essay, while another student with a learning disability uses text to speech to hear the essay read aloud while drafting it. The functional skills required for using digital materials and technologies, including physical, sensory, and cognitive, vary widely within and across

learners. These examples illustrate that accessibility is determined by the user, as opposed to being one fixed set of formats or features. Given that, a wide market exists for accessible digital materials and technologies, further incentivizing consumers and developers.

How do educational agencies meet their responsibility to procure accessible digital materials and technologies?

Educators and the agencies they work for can ensure that accessible digital materials and technologies are being used for teaching and learning by following a set of five guidelines. Note that none is intended to stand on its own. All five guidelines must be used interdependently for successful procurement outcomes.

1. Start by requiring that all procured materials and technologies be accessible. Without this stance, some students will continue to face unnecessary barriers to learning. Plain and simple.
2. Incorporate accessibility into your purchasing policies and practices, including conformance with Section 508 of the Rehabilitation Act of 1973 (Section 508)⁷ and the Web Content Accessibility Guidelines (WCAG) 2.0 AA.⁸ These are the nationally accepted benchmark accessibility standards for digital material and technology development.
3. Include accessibility language in contracts and purchase orders, including compliance with Section 508/WCAG 2.0 AA. The National Center on Accessible Educational Materials for Learning (AEM Center) has sample contract language for both print and digital materials.⁹
4. Ask vendors for Voluntary Product Accessibility Templates (VPAT). The VPAT is a form for vendors to self-report the conformance of a product to Section 508 standards. The current version is 2.1.¹⁰ Although thoroughly interpreting a VPAT requires a certain level of technical knowledge of accessibility in general and Section 508 in particular, it is a useful tool for notifying vendors of your commitment. The AEM Center is available to provide technical assistance and resources for understanding VPATs.
5. Recruit student volunteers to conduct trials of products being considered for purchase. The greater the learner variability among the students the better. Assistive technology users will be especially helpful.¹¹ Give the students an authentic task and observe them while they interact with the product. Ask about their user experience with questions directly related to the intended use of the

product in anticipated learning environments. Will students with unique access and learning needs be able to use the product in an equally effective and equally integrated manner, with substantially equivalent ease of use as students who interact with technology using standard methods?

Some developers are proactively complying with accessibility standards, knowing that states and districts need and want to buy accessible. Following the five guidelines will advance a market model, pushing us closer to a time when buying accessible requires nothing more than just buying.

States and districts can take further advantage of this moment by self-assessing their procurement practices using the AEM Center's Quality Indicators with Critical Components for the Provision of Accessible Educational Materials and Technologies.¹² The Quality Indicators guide agencies in developing and sustaining the provision of accessible educational materials and technologies so that every learner is given the same opportunity for participation, independence, and progress toward positive learning outcomes.

Conclusion

The promise of accessible digital materials and technologies has never been greater for learners who need them. Tools in the form of regulatory guidance, standards, UDL, and technical assistance are conjoined by a contemporary ethos that all students can learn when provided learning environments, curricula, and materials that empower them.

¹U.S. Department of Justice and U.S. Department of Education Joint "Dear Colleague" Letter: Electronic Book Readers (June 29, 2010)
<https://www2.ed.gov/about/offices/list/ocr/letters/colleague-20100629.html>

²The widely accepted definition of timely manner is "at the same time as students without disabilities."

³Cielo²⁴ Recent K-12 Web Accessibility Resolution Agreements (January 11, 2017)
<https://cielo24.com/2017/01/k-12-web-accessibility-resolution-agreements-public-schools/>

⁴UDL on Campus: Legal Obligations for Accessibility
http://udloncampus.cast.org/page/policy_legal

⁵CAST: About Universal Design for Learning <http://www.cast.org/our-work/about-udl.html>

⁶CAST: The UDL Guidelines <http://udlguidelines.cast.org/>

⁷GSA Section508.gov <https://www.section508.gov/>

⁸WCAG 2.1 <https://www.w3.org/TR/WCAG21/>

⁹Sample contract language <http://aem.cast.org/policies/local-purchase-order-contract-language.html>

¹⁰VPAT 2.1 <https://www.itic.org/policy/accessibility/vpat>

¹¹AT examples at the website of the National Institute of Child Health and Human Development <https://www.nichd.nih.gov/health/topics/rehabtech/conditioninfo/device>

¹²Quality Indicators with Critical Components for the Provision of Accessible Educational Materials and Technologies <http://aem.cast.org/policies/quality-indicators-provision-aem.html>